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## The distribution of *Mola alexandrini* in the Subtropical Eastern Atlantic, with a note on *Mola mola* \*\*

With 5 figures

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**ABSTRACT:** The presence of the “Bump-head sunfish” *Mola alexandrini* (Ranzani 1839) is recorded, via photographic evidence, from the Azores, Madeira Island, the Canary Islands, and the Cape Verde Islands. Eastern Atlantic individuals of *Mola mola* can also have a bump on the head.

**Keywords:** Pisces, Teleostei, Molidae.

**RESUMO:** A presença do peixe-lua *Mola alexandrini* (Ranzani 1839) é documentada, através de fotografia, para os Açores, a ilha da Madeira, as ilhas das Canárias, e as ilhas de Cabo Verde. Indivíduos da espécie *Mola mola* também podem ter uma bossa craniana.

**Palavras-chave:** Peixes, Teleostei, Molidae.

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## INTRODUCTION

Recently, SAWAI *et al.* (2018) resurrected *Mola alexandrini* (Ranzani 1839) as distinct from *Mola mola* (Linnaeus 1758). The criteria to recognize adult *Mola alexandrini* (English name “Bump-head sunfish”) are: head profile with bump; chin with bump; body scales rectangular; tail lobe (clavus) rounded and supported by 14-24 (mode 17) fin rays and 8-15 (12) ossicles on the rear margin.

## MATERIAL AND METHODS

We have collected photos and videos of *Mola* species from the area of the Azores southwards to the Cape Verde Islands. A *Mola* specimen from off Funchal, Madeira, in the collection of the Funchal Natural History Museum (registration number MMF 1002) was compared with the descriptions given by SAWAI *et al.* (2018).

## RESULTS

### 1) *Mola alexandrini* (Ranzani 1839)

The presence of *M. alexandrini* at the Azores is documented by underwater photos from Faial Island (Fig. 1) and the photo from São Miguel Island (identified as *Mola mola*) by Nuno Sá in WIRTZ (2011: 145) and by videos such as [<https://www.youtube.com/watch?v=5SpY5OLLxc>] and [<https://www.youtube.com/watch?v=zb0achcZwdg>] from Santa Maria Island.

The presence of *M. alexandrini* at Madeira Island is documented by a photo taken at the south coast near Caniço (Fig. 2), and by a video taken by the whale watching company “Lobosonda” [[https://www.youtube.com/watch?v=tUuDj\\_XHunI](https://www.youtube.com/watch?v=tUuDj_XHunI)] also taken at the south coast of Madeira Island.

The presence of *M. alexandrini* at the Canary Islands is documented by a photo from Tenerife Island (Fig. 3).

The presence of *M. alexandrini* at the Cape Verde Islands is documented by a photo taken by Filomena Sá Pinto at Santiago Island (identified as *Mola mola*), reproduced in D’ OLIVEIRA (2010: 64).



**Fig. 1** – *Mola alexandrini* at Faial Island (photo Ricardo Serrão Santos).



**Fig. 2** – *Mola alexandrini* at Madeira Island (photo anonymous client of Manta diving base).



**Fig. 3** – *Mola alexandrini* at Tenerife Island (photo Sergio Hanquet).



## 2) *Mola mola*

The Eastern Atlantic individuals of *Mola mola* apparently do not entirely correspond to the description of this species given by SAWAI *et al.* (2018).

A *Mola* individual from continental Portugal that has been on display in Lisbon Oceanário for many years had a distinct bump in the head, typical of *M. alexandrini* (Fig. 4); it did, however, have the lobed tail and the rectangular profile of the rear body, typical of *M. mola*, as well as lacking a bump on the chin. When sent several photos of this animal, Sawai (20 July 2019, *in litt.* to PW) wrote: "I think these ... are *M. mola*. In my paper, I wrote that *M. mola* is a little genetic apart in the Pacific and Atlantic ... I think *M. mola* in the Pacific and Atlantic are different subspecies / species."

A *Mola* specimen of 1600 mm total length from Madeira Island in the collection of Funchal Natural History Museum (MMF 1002) (Fig. 5) also has a distinct bump on the head but the scales and the clavus correspond to the description of *Mola mola* given by SAWAI *et al.* (2018).



**Fig. 4** – *Mola mola* in the Oceanario of Lisbon (photo Athila Bertoncini).

## DISCUSSION

Apparently, Eastern Atlantic *Mola mola* can have a bump on the head, similar to the "Bump-head sunfish" *Mola alexandrini*. They clearly differ from *M. alexandrini* in the shape of the clavus and the scales.

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**Fig. 5** – *Mola mola* (MMF 1002), from Madeira, in the Funchal Natural History Museum. 1600 mm TL (photo Helena Encarnação / MMF).

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